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ABSTRACT

Educators have historically tried to limit the openness of the educational system by determining what factors from the society as a whole are allowed to influence decision-making. Other system components have been held to be more properly designed by professionals apart from societal impact. Change through time in the educational system occurs so rapidly that by the time a system is designed and implemented, the objective is out-of-date. A dominant or consensual value of society should not be expressed as an educational goal, but as it can be made manifest in a decision-making strategy. (Author/MLF)

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DYNAMIC SYSTEMS AND STATIC GOALS: AN EDUCATIONAL DILEMMA

A paper presented at the annual meeting of the AERA
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DYNAMIC SYSTEMS

AND

STATIC GOALS: AN EDUCATIONAL DILEMMA

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Let me state the point of this paper directly, right from the outset, so that it will not get lost in the verbiage of illustration and explanation: if the decision-making strategies of an open system are designed to be consistent with a dominant or consensual value of the suprasystem (environment); then any decision made, regardless of its direction, will be consistent with that value and, hence, will be judged appropriate by the environment (suprasystem). In the schematic illustration of various systems, there are decision-making points either shown directly or implied. The input or information-flow into these decisions comes from either other subsystems or from the suprasystem. But what is rarely illustrated is the input into the structuring of the decision-making process itself. What we have, in other words, is information useful to the decision. What we do not have is information on the strategies for decision-making. What information, for example, tells us who--what person or what group--will make the decision? What information tells us how to prioritize such decision bases as personal pleasure, political expedience, economic miserliness, social benefit, etc.? In flow-chart language, what we have is an input line entering an empty decision diamond.

In education, it seems to me, we have historically tried to limit severely the openess of our system. We have developed rather sophisticated mechanisms for determining what environmental factors we will permit ourselves to be influenced by. Perhaps it would be much more

accurate, here, to speak of the schooling system rather than the educational system. Then the point would hardly need elaboration. The disjunctions between the schooling system and its larger social system have been rather passionately described by others.

But the mechanisms, in systems-theoretic terms, by which we have limited this openness do, I think, provide some useful clues about change. Generally, what we have done is to limit the interaction to one operation or task called, variously, "define objective," "specify goals," or by similar titles. We have limited the openness of the system by trying to regularize the flow from the environment into just this one activity.

The other system components have been held to be more "professional" in character. That is, they appear to be most properly designed, by professionals, apart from direct suprasystem impact. Relating this to two educational systems' models, it appears that the change from toput to input in the S.I.G.S. model of the Maccias and the shift from input to information in David Ryans' 1963 model are, by implication, self-selective operations. That is, the educational system -- not its suprasystem -- determines for itself what from the environment is relevant to the design and functioning of education.

It would appear that there are two current, related and conflicting trends in education.

First, the membrane separating the education system from its environmental suprasystem is becoming increasingly permeable. Mike Nunnery of the University of Florida presented a paper at the 1975 meeting of AERA in which he listed four significant education trends, the first of which was the increasing disappearance of the boundary

between educational administration and governance and public administration and governance. He cited several examples. Among these were: (1) the increased fusion of human services, including education, into single governmental agencies; (2) the opening up of many administrative and governing bodies' diliberations--the so-called "sunshine" laws; and (3) the decentralization of some administrative functions--the creation of area or subdistrict boards to subdivide large school districts, for instance. Many other indications exist to show the increasing pressure from the environment to impact the education system more directly.

In opposition to this trend is the tendency of the education system to channel, to structure, to regularize, to routinize and, hence, to control such impact. The creation of community councils and lay advisory bodies and the increased use of the Delphi and other techniques are providing additional information from the environment to the educationists. And this is important. But such mechanisms do, at the same time, regulate the kinds, amounts and entry points of such information. In short, this produces a limited, or regulated, system openness.

Both of these trends have reinforced each other and together they have prompted a significant interest in and concern for educational objectives or goals. Societal concerns are satisfied if the objectives represent sufficiently well these same societal concerns; educators' protective needs are satisfied if their design and operation functions are not impacted directly.

This goal concern has been reinforced, too, by educational systems engineers. In general, these people have not sought to apply

systems theory concepts directly to educational design. Rather, they have, most often, borrowed systems' applications from other fields--engineering and corporate management most notably--and have tried to adapt these applications to education. And most all of these applications are linear program models. That is, they presume the specification of a single, static goal as prerequisite to system design.

And so we have environmental concerns, educationists' needs and engineers' promises fusing into a growing tendency to try to establish concrete objectives for educational processes.

And at some levels this can be done successfully. For small educational subsystems--particular, specific units of instruction, for example--there is a sufficient degree of constancy to permit the implementation of the subsystem before the objective becomes dysfunctional.

In such a subsystem there is also the opportunity to stand off on a perspective-providing platform. A location which permits viewing and, thus, designing based on a total view--we can see the entire subsystem and all of its components all at once.

But in education writ large, i.e., the education system, neither of these conditions can be found. Change through time is rapid enough that we suffer from what John Hayman calls the "out-of-kilter time problem." By the time we design and implement a system, the objective is out of date.

And, there is no platform from which to view education wholistically. As we educators try to describe and design educational systems, we must be aware of the dictum of Pogo-- "...they is us." We are inside the system shaking it and rattling it as we try to model it.

If this is sufficient statement of the dilemma, then, return to

the point made at the outset for one possible solution.

If there is in society, or at any level of society, a dominant or consensual value, let it be expressed not as a goal but as it can be made manifest in a decision-making strategy. Let the ways in which educators make decisions reflect the value(s) of their constituent publics and the educational system will be publicly doomed to success.

There is one precedent example. Thomas Jefferson and the other drafters of the U. S. Constitution did not try to forecast the world of, even, the nineteenth century. Nor did they try to prescribe such a future. Rather they built decision-making mechanisms which, themselves, reflected a value held by consensus to be timeless. Their processes are being tested today as never before, but there is still some reason (or is it but a hope) to believe that these processes can and will remain vital.

A similar design strategy in education appears to be worth consideration.